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print medium, with a width of the discard area provided in the front end portion being greater than the distance from the front end of the accommodating portion to the feeding means determined in said determining step.

REMARKS

Reconsideration and withdrawal of the objection and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-13 are now pending in the application, with Claims 1-4 and 8-13 being independent. Claims 1-11 have been amended and Claims 12 and 13 have been added herein.

Initially, Applicants note that the Office Action Summary listed an Information Disclosure Citation form (Form PTO-1449) as an attachment. However, no such form was received with the Office Action. Accordingly, it is respectfully requested that the Form PTO-1449 provided with the Information Disclosure Statement filed October 29, 2001, be initialled and returned with the next correspondence. A copy of that form is included for the Examiner's convenience.

Claims 1-7 were objected to for allegedly being of unclear scope. Without conceding the propriety of this objection, Applicants have reworded those claims in combination format. That is, each of those claims is directed to the combination of a printing apparatus and a print medium. It is respectfully submitted that this format makes

the scope of the claims even clearer. Favorable consideration and withdrawal of the objection to the claims are requested.

Claims 1-4 and 7 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,571,587 (Bishop et al.). Claims 5 and 6 were rejected under § 103 as being unpatentable over Bishop et al. in view of U.S. Patent No. 4,978,146 (Warther et al.). Claims 8-11 were rejected under § 103 as being unpatentable over Bishop et al. in view of U.S. Patent No. 5,667,213 (Chida et al.). These rejections are respectfully traversed.

Independent Claims 1-4 are each directed to a combination of a printing apparatus and a print medium. The print medium includes a print area on which to print a desired image and a separable discard area. Each claim further recites at least one predetermined dimension in the printing apparatus.

Independent Claim 1 further recites the feature that a width of the discard area provided in at least a front end portion of the print medium is greater than a predetermined distance from the front end of an accommodating portion to a feeding means in the printing apparatus.

Independent Claim 2 recites the further feature that a width of the discard area provided in at least a front end portion of the print medium is greater than a predetermined distance from a rearmost effective printing portion of the printing means to discharge means.

Independent Claim 3 recites the further feature of a width of the discard area provided in at least a rear end portion of the print medium being greater than a

predetermined distance from a frontmost effective printing portion of printing means to transport means of the printing apparatus.

Independent Claim 4 recites the further features of i) a width of the discard area provided in a front end portion of the print medium being greater than a first predetermined distance from a front end of an accommodating portion to feeding means or a second predetermined distance from a rearmost effective printing portion of the printing means to discharge means, whichever is a greater distance, and ii) a width of the discard area provided in a rear end portion of the print medium is greater than a third predetermined distance from a frontmost effective printing portion of the printing means to the transport means.

Independent Claims 8-11 are each directed to a printing apparatus and recite features corresponding to those recited in independent Claims 1-4, respectively.

Newly-presented independent Claim 12 is directed to a method of manufacturing a print medium and independent Claim 13 is directed to a method of using a print medium. These method claims recite certain features from independent Claim 1.

Bishop et al. relates to a sheet stock for use with laser and ink jet printers. One example sheet includes several horizontal and vertical perforation lines to enable separation of printed images. Although certain regions defined by perforation lines may be considered discard areas, there is no disclosure or suggestion in Bishop et al. of any relationship between the width of any discard area and a predetermined dimension in the laser or ink jet printer. Thus, Bishop et al. fails to disclose or suggest any of the various features recited in the independent claims.

Warther et al. describes a printed sheet with scoring to define a plurality of sets of elements removable from the sheet. The Examiner suggests that Warther et al. teaches that the widths of discard areas in front and rear end portions of the sheet are larger than discard areas between print areas. Without conceding this point, Applicants respectfully submit that Warther et al. does not describe any dimensional relationship between discard areas and predetermined dimensions in a printer. Accordingly, Warther et al. fails to remedy the deficiencies of Bishop et al. noted above with respect to the independent claims.

Chida et al. relates to a printing apparatus including various sheet transporting feeding and conveying mechanisms. The Examiner suggests that because sheet feed roller 13 is disposed toward an end of a printing sheet tray 12, "the distance from a front end portion of the accommodating portion to the feeding means must be smaller than a width of the discard area in the front end portion of the print medium." It is respectfully submitted, however, that Chida et al. describes neither dimensions between the various components in the printer nor any discard area of the printing medium, much less dimensions of the discard area. Thus, Chida et al. also fails to remedy the deficiencies of the citations noted above with respect to the independent claims.

Thus, independent Claims 1-4 and 8-13 are patentable over the citations of record. Reconsideration and withdrawal of the § 103 rejections are respectfully requested.


For the foregoing reasons, Applicants respectfully submit that the present invention is patentably defined by independent Claims 1-4 and 8-13. Dependent Claims 5-7 are also allowable, in their own right, for defining features of the present invention in

addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the objection and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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MAW:mt

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The paragraph starting at page 2, line 26 has been amended as follows.

When a print medium is inserted into the printing apparatus and the print operation is started, the same or different images are printed at separate appropriate positions on the medium. After printing, the user separates the printed images from each other along the lines of perforations 2, 3. Printing the images [on] beyond the lines of perforations is not desirable as this will print the images 4 one upon the other and disturb them (overlap printing). The print medium transport performance of the ink jet printing apparatus and variations in the size of the print medium normally result in print position deviations of the order of a few millimeters. Hence, it is conventional practice to print [an] a smaller image a few millimeters [more smallish] inside the lines of perforations.

The paragraph starting at page 3, line 15 has been amended as follows.

As a result, a strip of white blank frame a few millimeters wide remains along the perforated lines around each separate image. That is, the printing of an entire surface of each print area (hereinafter referred to as [a] full bleed printing) as with [a] silver halide photography cannot be obtained.

The paragraph starting at page 3, line 21 has been amended as follows.

To deal with this situation it has been proposed to fully print an image up to the perforated [line] lines of each print area to realize the full bleed printing. This method enables the full bleed printing by providing a discard area outside the individual image separation lines (Japanese Patent Application Laid-Open Nos. 11-277879 and [10-1666748] 10-166748).

The paragraph starting at page 18, line 5 has been amended as follows.

The [word] words “print medium” or “print sheet” include not only paper used in common printing [apparatus] apparatuses, but cloth, plastic films, metal plates, glass, ceramics, wood, leather or any other material that can receive ink. This [word] term will be also referred to as “paper”.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) [A] In combination, a printing apparatus and a print medium to be supplied to [a] the printing apparatus, wherein the printing apparatus has a feeding means for feeding the print medium accommodated in [a predetermined] an accommodating portion to a transporting passage facing a [predetermined] printing means and transports the print medium fed by the feeding means along the transporting passage so that the printing means can print on the print medium, a front end of the accommodating }
portion being positioned a predetermined distance from the feeding means, the print }
medium comprising: X

a print area on which to print a desired image; and ✓

a separable discard area provided [separably] in at least a front end portion of the print medium, [;]

wherein a width of the discard area provided in at least [a] the front end portion is [set larger] greater than [a] the predetermined distance from [a] the front end of the accommodating portion to the feeding means. >X

2. (Amended) [A] In combination, a printing apparatus and a print medium to be [applied] supplied to [a] the printing apparatus, wherein the printing apparatus has a transport means for transporting the print medium along a transporting passage facing a printing means and a discharge means arranged downstream of the transport means, and at least one of the transport means and the discharge means transports ✓

the print medium along the transporting passage so that the printing means can print on the print medium, the discharge means being positioned a predetermined distance from a rearmost effective printing portion of the printing means, the print medium comprising:

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a print area on which to print a desired image; and

a separable discard area provided [separably] in at least a front end portion of the print medium, [;]

wherein a width of the discard area provided in at least [of] the front end portion is [set larger] greater than [a] the predetermined distance from [a most downstream position printed by] the rearmost effective printing portion of the printing means to the discharge means.

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3. (Amended) [A] In combination, a printing apparatus and a print medium to be [applied] supplied to [a] the printing apparatus, wherein the printing apparatus has a transport means for transporting the print medium along a transporting passage facing a printing means and a discharge means arranged downstream of the transport means, and at least one of the transport means and the discharge means transports the print medium along the transporting passage so that the printing means can print on the print medium, the transport means being positioned a predetermined distance from a frontmost effective printing portion of the printing means, the print medium comprising:

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a print area on which to print a desired image; and

a separable discard area provided [separably] in at least a rear end portion of the print medium, [;]

wherein a width of the discard area provided in at least [of] the rear end portion of the print [media] medium is [set larger] greater than [a] the predetermined distance from [a most upstream position printed by] the frontmost effective printing portion of the printing means to the transport means.

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4. (Amended) [A] In combination, a printing apparatus and a print medium to be [applied] supplied to [a] the printing apparatus, wherein the printing apparatus has a feeding means for feeding the print medium accommodated in [a predetermined] an accommodating portion to a transporting passage facing a [predetermined] printing means, a transport means for transporting the print medium along a transporting passage and a discharge means arranged downstream of the transport means, and wherein after the print medium has been fed to the transporting passage, at least one of the transport means and the discharge means transports the print medium along the transporting passage so that the printing means can print on the print medium, a front end of the accommodating portion being positioned a first predetermined distance from the feeding means, the discharge means being positioned a second predetermined distance from a rearmost effective printing portion of the printing means, and the transport means being positioned a third predetermined distance from a frontmost effective printing portion of the printing means, the print medium comprising:

a print area on which to print a desired image; and

a separable discard area [separably] provided in at least a front end portion and a rear end portion of the print medium, [;]

wherein a width of the discard area provided in the front end portion of the print medium is [set larger] greater than [a] the first predetermined distance from [a] the front end of the accommodating portion to the feeding means or [a] the second predetermined distance from [a most downstream position printed by] the rearmost effective printing portion of the printing means to the discharge means, whichever is a greater distance, and [;]

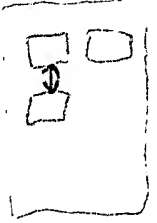
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wherein a width of the discard area provided in the rear end portion of the print medium is [set larger] greater than [a] the third predetermined distance from [a most upstream position printed by] the frontmost effective printing portion of the printing means to the transport means.

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5. (Amended) A [print medium] combination according to claim 1, wherein the print medium has a plurality of print areas and the widths of [the] discard areas in the front and rear end portions of the print medium are [set larger] greater than that of a discard area between the print areas.

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or 879

6. (Amended) A [print medium] combination according to claim 1, wherein the print medium has a plurality of print areas and widths of discard areas in left and right end portions of the print medium are [set larger] greater than a length in the transport direction of the discard area between the print areas.

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7. (Amended) A [print medium] combination according to claim 1, wherein the print medium has a plurality of print areas and separable discard areas before and after each print area, a discard area in a front end portion of the print medium and a discard area in a rear end portion of the print medium are set equal in width, and a discard area in a left end portion of the print medium and a discard area in a right end portion of the print medium are set equal in width.

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8. (Amended) A printing apparatus comprising:
an accommodating portion for accommodating a print medium, the print medium having a print area on which to print an image and a separable discard area in at least one of a front end portion and a rear end portion [hereof] thereof; and

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[a] feeding means for feeding the print medium accommodated in the accommodating portion to a transporting passage facing a [predetermined] printing means, [;]

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wherein the print medium fed by the feeding means is transported along the transporting passage so that the printing means can print on the print medium, and [;]

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wherein the accommodating portion [has a dimensional setting] is dimensioned such that a distance from a front end of the accommodating portion to the feeding means is [set smaller] less than a width of the discard area in the front end portion of the print medium.

9. (Amended) A printing apparatus comprising:

[a] transport means for transporting a print medium along a transporting passage facing a printing means, the print medium having a print area on which to print an image and a separable discard area [separably] provided in at least one of a front end portion and a rear end portion thereof; and

[a] discharge means arranged downstream of the transport means, [;]

wherein at least one of the transport means and the discharge means transports the print medium along the transporting passage so that the printing means can print on the print medium, and [;]

wherein a distance from a [most downstream position printed by] rearmost effective printing portion of the printing means to the discharge means is [set smaller] less than a width of the discard area provided in the front end portion of the print medium.

g + < 1/2 cover

10. (Amended) A printing apparatus comprising:

[a] transport means for transporting a print medium along a transporting passage facing a printing means, the print medium having a print area on which to print an image and a discard area separably provided in at least one of a front end portion and a rear end portion thereof; and

[a] discharge means arranged downstream of the transport means, [;]

wherein at least one of the transport means and the discharge means transports the print medium along the transporting passage so that the printing means can print on the print medium, and [;]

wherein a distance from a [most upstream position printed by] frontmost effective printing portion of the printing means to the transport means is [set smaller] less than a width of the discard area provided in the rear end portion of the print medium.

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11. (Amended) A printing apparatus comprising:

[a] feeding means for feeding a print medium to a transporting passage facing a predetermined printing means, the print medium having a print area on which to print an image and a discard area separably provided in at least one of a front end portion and a rear end portion thereof;

[a] transport means for transporting the print medium along the transporting passage; and

[a] discharge means arranged downstream of the transport means, [;]

wherein after the print medium accommodated in [a predetermined] an accommodating portion has been fed to the transporting passage, at least one of the transport means and the discharge means transports the print medium along the transporting passage so that the printing means can print on the print medium, [;]

wherein the print medium has a print area on which to print a desired image and a separable discard area [separably] provided in at least a front end portion and a rear end portion thereof, [;]

wherein a distance from a [most downstream position printed by] rearmost effective printing portion of the printing means to the discharge means or a distance from a [most upstream position printed by] frontmost effective printing portion of the printing

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A hand-drawn diagram consisting of a vertical rectangle. Inside the rectangle, there is a zigzag line running vertically. To the left of the top of the rectangle, there is a small circle. To the right of the middle of the rectangle, there is a horizontal line extending outwards.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE ABSTRACT

A print medium to be applied to a printing apparatus has print areas on which to print desired images and a separable discard area [or separably] provided [in] at at least one of the front and rear end portions thereof. The width of the discard area provided [in] at the front end portion of the print medium is set wider than a distance from the front end of [the] a print medium accommodating portion to [the] a feeding [means] mechanism and a distance from [the] a discharge [means] mechanism to the most downstream position printed by the printing [means] head. The width of the discard area provided [in] at the rear end portion of the print medium is set wider than a distance from the most upstream position printed by the printing [means] head to [the] a transport [means] mechanism.

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